



A-71386-7
10/672,280
US EXPRESS MAIL RECEIPT No. EV 695993858

SUBSTITUTE SHEET

Figure 3

VH1->

1 10 20 30 40 50 60
123456789012345678901234567890123456789012345678901234567890
QVQLQESGPGLVRPSQTLSTCTVSGFTFTDFYMNWVRQPPGRGLEWIGFIRDKAKGYTT

70 80 90 100 110 120
123456789012345678901234567890123456789012345678901234567890
EYNPSVKGRVTMLVDTSKNQFSLRLSSVTAADTAVYYCAREGHTAAPFDYWGQGS�VTVS

Cy1->

130 140 150 160 170 180
123456789012345678901234567890123456789012345678901234567890
SASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQS

HINGE->

190 200 210 220 230 240
123456789012345678901234567890123456789012345678901234567890
SGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLG
1234567890123456
KABAT 22 23

Cy2->

250 260 270 280 290 300
123456789012345678901234567890123456789012345678901234567890
GPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQY
789012345678901234567890123456789012345678901234567890123456
240 250 260 270 280 290

?Cy3?->

310 320 330 340 350 360
123456789012345678901234567890123456789012345678901234567890
NSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRD
789012345678901234567890123456789012345678901234567890123456
300 310 320 330 340 350

370 380 390 400 410 420
123456789012345678901234567890123456789012345678901234567890
ELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSR
789012345678901234567890123456789012345678901234567890123456
360 370 380 390 400 410

430 440 450
1234567890123456789012345678901
WQOGNVFSCSVMEALHNHYTQKSLSLSPGK
7890123456789012345678901234567
420 430 440

SEQ ID NO: 1

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Figure 5

22	23	24	25	26	27	28
123456789012345678901234567890123456789012345678901234567890						
DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD						
29	30	31	32	33	34	
123456789012345678901234567890123456789012345678901234567890						
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK						
35	36	37	38	39	40	
123456789012345678901234567890123456789012345678901234567890						
GQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDS						
41	42	43	44			
12345678901234567890123456789012345678901234567						
DGSFFLYSKLTVDKSRWQQGNVFCFSVMHEALHNHYTQKSLSLSPGK				SEQ ID NO: 2		

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Figure 31a

Anti-CD20 light chain

QIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQKPGSSPKWIYATSNLASGVPVRFSGSGSG
TSYSLTISRVEADAATYYCQQWTSNPPTFGGGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVCLL
NNFYPREAKVQWKVDNALQSGNSQESVTEQDSKSTYLSSTLTLSKADYEKHKVYACEVTHQGLS
SPVTKSFNRGEC

SEQ ID NO: 3

Figure 31b

Anti-CD20 heavy chain

QVQLQQPGAELVKPGASVKMSCKASGYTFTSYNMHWVKQTPGRGLEWIGAIYPGNGDTSYNQKFK
GKATLTADKSSSTAYMQLSSLTSEDSAVYYCARSTYYGGDWYFNVWGAGTTTVTSAASTKGPSVFP
LAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLG
TQTYICNVNHKPSNTKVDKKAEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV
VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKA
LPAPIEKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTP
PVLDSGDSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

SEQ ID NO: 4

Figure 31c

Anti-CD20 heavy chain comprising possible Fc variants

QVQLQQPGAELVKPGASVKMSCKASGYTFTSYNMHWVKQTPGRGLEWIGAIYPGNGDTSYNQKFK
GKATLTADKSSSTAYMQLSSLTSEDSAVYYCARSTYYGGDWYFNVWGAGTTTVTSAASTKGPSVFP
LAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLG
TQTYICNVNHKPSNTKVDKKAEPKSCDKTHTCPPCPAPELLGGP_{X₁}_{X₂}FLFPPKPKDTLMISRTPEVTC
V_{X₃}_{X₄}DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQY_{X₅}_{X₆}_{Z₁}TYRVVSVLTVLHQDWLNGKEYKCKVSN
KALP_{X₅}_{X₆}EKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNY
KTPPVLDSDGDSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

Position	WT	Possible Substitutions
X ₁	S	D, E, N, Q, T
X ₂	V	I, M
X ₃	V	I, T, Y
X ₄	N	D
X ₅	A	Y, L, I
X ₆	I	D, E, N, Q
Z ₁	S	A

SEQ ID NO: 5